

WHAT IS CLAIMED IS:

1. A printing apparatus which has print means, and a multi-copy print function, comprising:

first storage means for storing print data;

5 image generation means for reading out the print data from said first storage means, and generating image data;

second storage means for storing the image data;

10 first measurement means for measuring a first time required for generating the image data by said image generation means;

second measurement means for measuring a second time required for reading out the image data from said second storage means;

15 comparison means for comparing the first and second times; and

selection means for selecting as a print method a first method which prints based on the print data stored in said first storage means for each copy, and a
20 second method that prints based on the image data stored in said second storage means for each copy, on the basis of the result of said comparison means,

wherein said selection means always selects a predetermined one of the first and second methods
25 irrespective of the result of said comparison means when the print data indicates a predetermined mode.

2. The apparatus according to claim 1, wherein said first and second measurement means measure the first and second times upon printing a first copy of a plurality of copies, and said selection means

5 determines the print method for second and subsequent copies.

3. The apparatus according to claim 1, wherein said second storage means compresses and stores the image data.

10 4. The apparatus according to claim 1, wherein said print means is color print means having a density correction function, and when print data is color data, said selection means selects the first method irrespective of the result of said comparison means.

15 5. The apparatus according to claim 1, wherein said selection means selects the print method for each print job.

6. The apparatus according to claim 1, wherein said selection means selects the print method for each print
20 page.

7. The apparatus according to claim 1, wherein when one of the first and second methods is designated as the print method, said selection means selects the designated method as the print method.

25 8. The apparatus according to claim 1, further comprising correction input means for externally inputting density correction data, and wherein when

density correction data is externally input, said image generation means reads out the print data from said first storage means, generates the image data again in accordance with the input density correction data, and
5 stores the generated image data in said second storage means irrespective of the print method selected.

9. The apparatus according to claim 8, further comprising means for reading an image printed on a paper sheet during a print process, and means for
10 generating density correction data on the basis of the read image.

10. The apparatus according to claim 1, wherein when the second method is selected as the print method, said image generation means reads out the print data from
15 said first storage means at a predetermined timing, analyzes the data to generate image data, and stores the generated image data in said second storage means to update old data.

11. The apparatus according to claim 1, further
20 comprising re-print means for holding the print data of said first storage means, the image data of said second storage means, and the measurement results of said first and second measurement means, and printing in accordance with a re-print instruction.

25 12. The apparatus according to claim 1, further comprising means for reading out the print data from said first storage means during a print data waiting

time, controlling said image generation means to analyze the data to generate image data, and storing the image data in said second storage means to update old data.

- 5 13. The apparatus according to claim 2, wherein a predetermined value is pre-stored as the second time, the first time and the predetermined value are compared without holding the image data upon printing the first copy, and said selection means selects as the print
10 method the first method when the first time is smaller than the predetermined value or the second method when the first time is larger than the predetermined value.

14. A control method for a printing apparatus which has print means, and a multi-copy print function,
15 comprising:
a first storage step of storing print data in first storage means;
an image generation step of reading out the print data from said first storage means, and generating
20 image data;
a second storage step of storing the image data in second storage means;
a first measurement step of measuring a first time required for generating the image data in the
25 image generation step;

a second measurement step of measuring a second time required for reading out the image data from said second storage means;

a comparison step of comparing the first and
5 second times; and

a selection step of selecting as a print method a first method which prints based on the print data stored in said first storage means for each copy, and a second method that prints based on the image data
10 stored in said second storage means for each copy, on the basis of the result in the comparison step,

wherein the selection step includes a step of always selecting a predetermined one of the first and second methods irrespective of the result in the
15 comparison step when the print data indicates a predetermined mode.

15. The method according to claim 14, wherein the first and second measurement steps measure the first and second times upon printing a first copy of a
20 plurality of copies, and the selection step includes the step of determining the print method for second and subsequent copies.

16. The method according to claim 14, wherein said second storage means compresses and stores the image
25 data.

17. The method according to claim 14, wherein said print means is color print means having a density

correction function, and the selection step includes a step of selecting the first method irrespective of the result in the comparison step when print data is color data.

5 18. The method according to claim 14, wherein the selection step includes a step of selecting the print method for each print job.

10 19. The method according to claim 14, wherein the selection step includes a step of selecting the print method for each print page.

20. The method according to claim 14, wherein the selection step includes a step of selecting, when one of the first and second methods is designated as the print method, the designated method as the print method.

15 21. The method according to claim 14, further comprising a correction input step of externally inputting density correction data, and wherein the image generation step includes a step of reading out, when density correction data is externally input, the print data from said first storage means, generating the image data again in accordance with the input density correction data, and storing the generated image data in said second storage means irrespective of the print method selected.

25 22. The method according to claim 21, further comprising a step of reading an image printed on a paper sheet during a print process, and a step of

generating density correction data on the basis of the read image.

23. The method according to claim 14, wherein the image generation step includes a step of reading out,
5 when the second method is selected as the print method, the print data from said first storage means at a predetermined timing, analyzing the data to generate image data, and storing the generated image data in said second storage means to update old data.

10 24. The method according to claim 14, further comprising a re-print step of holding the print data of said first storage means, the image data of said second storage means, and the measurement results in the first and second measurement steps, and printing in
15 accordance with a re-print instruction.

25. The method according to claim 14, further comprising a step of reading out the print data from said first storage means during a print data waiting time, analyzing the data in the image generation step
20 to generate image data, and storing the image data in said second storage means to update old data.

26. The method according to claim 15, wherein a predetermined value is pre-stored as the second time, the first time and the predetermined value are compared
25 without holding the image data upon printing the first copy, and the selection step includes a step of selecting as the print method the first method when the

first time is smaller than the predetermined value or the second method when the first time is larger than the predetermined value.

27. A computer program for making a computer control
5 a printing apparatus which has print means, and a multi-copy print function, comprising:

a first storage step of storing print data in first storage means;

10 an image generation step of reading out the print data from said first storage means, and generating image data;

a second storage step of storing the image data in second storage means;

15 a first measurement step of measuring a first time required for generating the image data in the image generation step;

a second measurement step of measuring a second time required for reading out the image data from said second storage means;

20 a comparison step of comparing the first and second times; and

a selection step of selecting as a print method a first method which prints based on the print data stored in said first storage means for each copy, and a
25 second method that prints based on the image data stored in said second storage means for each copy, on the basis of the result in the comparison step,

wherein the selection step includes a step of always selecting a predetermined one of the first and second methods irrespective of the result in the comparison step when the print data indicates a predetermined mode.

28. The program according to claim 27, wherein the first and second measurement steps measure the first and second times upon printing a first copy of a plurality of copies, and the selection step includes a step of determining the print method for second and subsequent copies.

29. The program according to claim 27, wherein said second storage means compresses and stores the image data.

30. The program according to claim 27, wherein said print means is color print means having a density correction function, and the selection step includes a step of selecting the first method irrespective of the result in the comparison step when print data is color data.

31. The program according to claim 27, wherein the selection step includes a step of selecting the print method for each print job.

32. The program according to claim 27, wherein the selection step includes a step of selecting the print method for each print page.

33. The program according to claim 27, wherein the selection step includes a step of selecting, when one of the first and second methods is designated as the print method, the designated method as the print method.

5 34. The program according to claim 27, further comprising a correction input step of externally inputting density correction data, and wherein the image generation step includes a step of reading out, when density correction data is externally input, the
10 print data from said first storage means, generating the image data again in accordance with the input density correction data, and storing the generated image data in said second storage means irrespective of the print method selected.

15 35. The program according to claim 34, further comprising a step of reading an image printed on a paper sheet during a print process, and a step of generating density correction data on the basis of the read image.

20 36. The program according to claim 27, wherein the image generation step includes a step of reading out, when the second method is selected as the print method, the print data from said first storage means at a predetermined timing, analyzing the data to generate
25 image data, and storing the generated image data in said second storage means to update old data.

37. The program according to claim 27, further comprising a re-print step of holding the print data of said first storage means, the image data of said second storage means, and the measurement results in the first
5 and second measurement steps, and printing in accordance with a re-print instruction.

38. The program according to claim 27, further comprising a step of reading out the print data from said first storage means during a print data waiting
10 time, analyzing the data in the image generation step to generate image data, and storing the image data in said second storage means to update old data.

39. The program according to claim 28, wherein a predetermined value is pre-stored as the second time,
15 the first time and the predetermined value are compared without holding the image data upon printing the first copy, and the selection step includes a step of selecting as the print method the first method when the first time is smaller than the predetermined value or
20 the second method when the first time is larger than the predetermined value.

40. A computer readable storage medium that stores a computer program cited in claim 27.